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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,563	07/31/2006	Leo Jan Velthoven	NL 040099	2969

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EXAMINER	
ENTEZARI, MICHELLE M	
ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,563	VELTHOVEN ET AL.	
	Examiner	Art Unit	
	MICHELLE ENTEZARI	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It was not executed in accordance with either 37 CFR 1.66 or 1.68.

Drawings: Notes

3. Fig. 3 does not rise to the level of an objection, given that it includes numerical labels, however, Examiner notes it would be helpful to better label the boxes to make it clear what is happening at each step.

Specification

4. The disclosure is objected to because of the following informalities: The brief summary of the invention includes claim numbers. This will potentially create confusion later in prosecution if the claim numbering is changed. Examiner suggests removing claim numbers from this section.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1-6, 11-13, 14-18, and 23 - 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Volk (US 5673401).

Regarding claims 1, 14, 26, and 27, Volk discloses a system and computer implemented method (abstract, col. 9, lines 5-10) of changing the size of presentation of an image data stream provided in an image data format comprising the steps of: a) obtaining an image data stream coded in a format and having a first original field of view

to be presented in (television-related programming is delivered as a stream of digital video and/or audio signals in a compressed digital data stream, including conventional compression schemes, such as MPEG-1 and MPEG-2, col. 13, lines 1-15, col. 14, lines 25-40), b) selecting at least parts of the image data stream (sprite, background, can be mixed, col. 10, lines 30-50; objects assigned their own sprites, col. 26, lines 50-60), c) obtaining, from selected image data, values of pixel regions from an area larger than the original field of view, (scaling property can be utilized so that a frame and all of its children are scaled down to the video safe area, col. 26, lines 20-35; device independent bitmap can be stretched, col. 33, lines 45-55), and d) changing the field of view by calculating an image to be displayed conforming to a second field of view based on the obtained data and values, such that image data (X') comprises pixel values substantially covering the second field of view (Sprites may hide portions of the displayed image at each pixel (e.g., by providing appropriate alpha values for the pixels in the sprite), or may be blended with the pixel values of the displayed image, col. 10, lines 30-50; scaling property can be utilized so that a frame and all of its children are scaled down to the video safe area, col. 26, lines 20-35).

Volk does not explicitly use the phrase “selecting at least parts of the image data stream”, however, it would have been obvious at the time of the invention to one of ordinary skill in the art that to distinguish the background from the sprite, there would be a selection step occurring. Also, Volk does not explicitly describe “pixel values substantially covering the second field of view”, however, as the background can peek

through the sprite, it is indicated a sprite is layered on the background, and when the resizing occurs, it would be natural the resized image would be on top.

Regarding claims 2 and 15, Volk discloses a method and device according to claims 1 and 15. Volk further discloses objects of the image data stream are provided as pixels in different layers, where the pixel regions outside the first field of view are provided in at least one layer and the step of changing the field of view comprises combining objects of at least some of the layers of the decoded image data stream including said one layer, for providing an output data stream allowing presentation of image data (objects assigned their own sprites, col. 26, lines 50-60; scaling property can be utilized so that a frame and all of its children are scaled down to the video safe area, col. 26, lines 20-35; device independent bitmap can be stretched, col. 33, lines 45-55).

Regarding claim 3, Volk discloses the method of claim 1. Volk further indicates the step of e) displaying at least some of the image data in the stream on a display with the second field of view, (scaled for proper display in screen area, col. 26, lines 20-35; multiple objects drawn onto single display surface, col. 26, lines 60-65).

Regarding claims 4 and 16, Volk discloses the method and device of claims 1 and 14. Volk further indicates the coded stream is an MPEG-4 image data stream (col. 13, lines 1-15, col. 14, lines 25-40) and at least some of the pixel regions that are at least partially outside the original field of view are coded as a sprite (preferred to have a

control item assigned to its own sprite if the control item should be rendered outside the boundaries of its parent's sprite region, col. 26, lines 55-65).

Regarding claims 5 and 17, Volk discloses the method and device of claims 1 and 14. Volk further indicates the step of f) processing the selected image data regarding mapping of less satisfactory positions of pixels in the second field of view (Volk, device independent bitmap can be stretched, col. 33, lines 45-55).

Regarding claims 6 and 18, Volk discloses the method and device of claims 5 and 17. Volk further indicates the step of processing comprises any of the steps of stretching the image in one direction, stretching the image in one direction with uneven zoom factor, stretching the image in two directions or providing black bars at the sides of the image (Volk, device independent bitmap can be stretched, col. 33, lines 45-55).

Regarding claims 11 and 23, Volk discloses the method and device of claims 5 and 17. Volk further indicates the step of processing comprises shifting at least a region of the pixels of one layer in relation to the pixels of at least one other layer in order to allow the objects of said one layer to be adjusted in relation to objects of said other layer (col. 26, line 50 – col. 27, line 5).

Regarding claims 12 and 24, Volk discloses the method and device of claims 1 and 14. Volk does not explicitly disclose the first field of view corresponds to an aspect ratio

of 4:3 and the second field of view corresponds to an aspect ratio of 16:9. However, as Volk discloses the claimed invention except for these explicit ratios. It would have been obvious to one having ordinary skill in the art at the time the invention was made to correspond to 4:3 and 16:9, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Regarding claims 13 and 25, Volk discloses the method and device according to claims 2 and 14. Volk does not explicitly disclose the values of pixel regions outside the first field of view are provided in at least one different output data stream than the stream including the combined objects. However, as Volk discloses an interactive network in which the system is used for delivering information and receiving instructions via a "two-way" distribution network (col. 11, lines 10-15), this is good evidence that a different data stream is used for the different fields of view.

7. **Claims 7 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Volk (US 5673401) as applied to claims 5 and 17 above, further in view of (Wise et al. (US 6130676 A).

Regarding claims 7 and 19, Volk discloses the method and device of claims 5 and 17. Volk does not disclose the step of processing comprises cutting and pasting older

picture material to later picture material if no or insufficient pixel regions outside the original field of view are at hand for provision in the second field of view.

Wise et al. teach extracts a previously saved image or image portion from the buffer for pasting into the displayed image (col. 7, lines 25-30).

It would have been obvious at the time of the invention to one of ordinary skill in the art to use the method of filling in the region with older material as taught by Wise et al. with the invention of Volk, as this is a technique conventionally used to fill in unknown regions, and would have been one of a limited number of ways to fill in the information.

8. **Claims 8, 9, 20, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Volk (US 5673401) as applied to claims 5 and 17 above, further in view of Walczak (US 20030052899 A1).

Regarding claims 8, 9, 20, and 21, Volk discloses the method and device according to claims 5 and 17. Volk does not explicitly disclose the step of processing comprises applying a geometrical image transformation for at least a region of the image outside the original field of view where there are pixels missing for the second field of view, or wherein the geometrical image transformation comprises filling the missing pixels using extrapolation of existing pixels.

Walczak teaches, "In the manipulation approach, an image is rendered from the audience point of view and the resulting pixels are mapped into corresponding positions in the film image. Pixel manipulation requires that image data be stretched or filled-in to complete the projected image. The three-dimensional geometric transformation of the invention enables a scene to be rendered at full resolution from the projector point of view." (abstract)

It would have been obvious at the time of the invention to one of ordinary skill in the art to use the method of filling in the region as taught by Walczak with the invention of Volk, as this is a technique conventionally used to fill in unknown regions, and would have been one of a limited number of ways to fill in the information.

9. **Claims 10 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Volk (US 5673401) and Walczak (US 20030052899 A1) as applied to claims 8 and 20 above, further in view of Kaye et al. (US 20050104878 A1).

Regarding claims 10 and 22, Volk and Walczak disclose the method and device according to claims 8 and 20. Volk and Walczak do not explicitly disclose the geometrical image transformation comprises copying border pixels for filling missing pixels.

Kaye et al. indicate a missing gap of pixels can be filled by repeating pixels from the edge of the background object (abstract, [0004], [0035]).

It would have been obvious at the time of the invention to one of ordinary skill in the art to use the method of filling in the region as taught by Kaye et al. with the invention of Volk and Walczak, as this is a technique conventionally used to fill in unknown regions, and would have been one of a limited number of ways to fill in the information.

10. **Claims 1-6, 11-13, 14-18, and 23 - 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsh (US 20020052235 A1) In view of Volk (US 5673401).

Regarding claims 1, 14, 26, and 27, Hirsh discloses a system and computer implemented method ([0022], [0023]) of changing the size of presentation of an image data stream provided in an image data format comprising the steps of: b) selecting at least parts of the image data stream (creating the character image and background image as separate sprites, [0089]), c) obtaining, from selected image data values of pixel regions from an area larger than the original field of view, (a size or dimension for a sprite which can be smaller or larger than the size or a dimension of the display frame, [0023]; background sprite is specified with a predetermined velocity or movement and a size or dimension which is greater than that of the display frame, the height and/or width of the background sprite is greater than the height and/or width of the display frame, CPU writes pixel values, according to these specifications, for the entire background

sprite, [0028], [0069], [0090]), and d) changing the field of view by calculating an image to be displayed conforming to a second field of view based on the obtained data and values, such that image data comprises pixel values substantially covering the second field of view (display frame is a matrix of pixels covering the entire screen area of display device, [0011]; when transparent pixels are included in sprites, the background of the sprite appears in place of the transparent pixels [0023]).

Hirsh does not explicitly disclose obtaining an image data stream coded in a format and having a first original field of view to be presented in, and selecting at least parts of the image data.

Volk teaches obtaining an image data stream coded in a format and having a first original field of view to be presented in (television-related programming is delivered as a stream of digital video and/or audio signals in a compressed digital data stream, including conventional compression schemes, such as MPEG-1 and MPEG-2, col. 13, lines 1-15, col. 14, lines 25-40), and selecting at least parts of the image data stream (sprite, background, can be mixed, col. 10, lines 30-50; objects assigned their own sprites, col. 26, lines 50-60).

It would have been obvious at the time of the invention to one of ordinary skill in the art to combine the invention of Volk with the invention of Hirsh, as this would be one of a limited number of data formats in which the video stream could come in, and because

selecting components for further operations would be necessary for many further operations.

Regarding claims 2 and 15, Hirsh and Volk disclose a method and device according to claims 1 and 14. Hirsh and Volk further disclose objects of the image data stream are provided as pixels in different layers, where the pixel regions outside the first field of view are provided in at least one layer and the step of changing the field of view comprises combining objects of at least some of the layers of the decoded image data stream including said one layer, for providing an output data stream allowing presentation of image data (Hirsh: size or dimension for a sprite which can be smaller or larger than the size or a dimension of the display frame, [0023]; background sprite is specified with a predetermined velocity or movement and a size or dimension which is greater than that of the display frame, the height and/or width of the background sprite is greater than the height and/or width of the display frame, CPU writes pixel values, according to these specifications, for the entire background sprite, [0028], [0069], [0090]; Volk: objects assigned their own sprites, col. 26, lines 50-60; scaling property can be utilized so that a frame and all of its children are scaled down to the video safe area, col. 26, lines 20-35; device independent bitmap can be stretched, col. 33, lines 45-55).

Regarding claim, Hirsh and Volk disclose the method of claim 1. Hirsh and Volk further indicate the step of e) displaying at least some of the image data in the stream on a

display with the second field of view, (Hirsh: display frame, [0023]; Volk: scaled for proper display in screen area, col. 26, lines 20-35; multiple objects drawn onto single display surface, col. 26, lines 60-65).

Regarding claims 4 and 16, Hirsh and Volk disclose the method and device of claims 1 and 14. Hirsh and Volk further indicate the coded stream is an MPEG-4 image data stream (Volk, col. 13, lines 1-15, col. 14, lines 25-40) and at least some of the pixel regions that are at least partially outside the original field of view are coded as a sprite (Hirsh, a size or dimension for a sprite which can be smaller or larger than the size or a dimension of the display frame, [0023]; Volk, preferred to have a control item assigned to its own sprite if the control item should be rendered outside the boundaries of its parent's sprite region, col. 26, lines 55-65).

Regarding claims 5 and 17, Hirsh and Volk disclose the method and device of claims 1 and 14. Volk further indicates the step of f) processing the selected image data regarding mapping of less satisfactory positions of pixels in the second field of view (Volk, device independent bitmap can be stretched, col. 33, lines 45-55).

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zoom factor, stretching the image in two directions or providing black bars at the sides of the image (Volk, device independent bitmap can be stretched, col. 33, lines 45-55).

Regarding claims 11 and 23, Hirsh and Volk disclose the method and device of claims 5 and 17. Hirsh and Volk further indicate the step of processing comprises shifting at least a region of the pixels of one layer in relation to the pixels of at least one other layer in order to allow the objects of said one layer to be adjusted in relation to objects of said other layer (Hirsh, [0022]; Volk, col. 26, line 50 – col. 27, line 5).

Regarding claims 12 and 24, Hirsh and Volk disclose the method and device of claim 1 and 14. Hirsh and Volk do not explicitly disclose the first field of view corresponds to an aspect ratio of 4:3 and the second field of view corresponds to an aspect ratio of 16:9. However, as Hirsh and Volk disclose the claimed invention except for these explicit ratios, it would have been obvious to one having ordinary skill in the art at the time the invention was made to correspond to 4:3 and 16:9, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Regarding claims 13 and 25, Hirsh and Volk disclose the method and device according to claims 2 and 14. Hirsh and Volk do not explicitly disclose the values of pixel regions outside the first field of view are provided in at least one different output

data stream than the stream including the combined objects. However, as Volk discloses an interactive network in which the system is used for delivering information and receiving instructions via a "two-way" distribution network (col. 11, lines 10-15), this is good evidence that a different data stream is used for the different fields of view.

11. **Claims 7 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsh (US 20020052235 A1) and Volk (US 5673401) as applied to claims 5 and 17 above, further in view of Wise et al. (US 6130676 A).

Regarding claims 7 and 19, Hirsh and Volk disclose the method and device of claims 5 and 17. Hirsh and Volk do not disclose the step of processing comprises cutting and pasting older picture material to later picture material if no or insufficient pixel regions outside the original field of view are at hand for provision in the second field of view.

Wise et al. teach extracts a previously saved image or image portion from the buffer for pasting into the displayed image (col. 7, lines 25-30).

It would have been obvious at the time of the invention to one of ordinary skill in the art to use the method of filling in the region with older material as taught by Wise et al. with the invention of Hirsh and Volk, as this is a technique conventionally used to fill in unknown regions, and would have been one of a limited number of ways to fill in the information.

12. **Claims 8, 9, 20, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsh (US 20020052235 A1) and Volk (US 5673401) as applied to claims 5 and 17 above, further in view of Walczak (US 20030052899 A1).

Regarding claims 8, 9, 20, and 21, Hirsh and Volk disclose the method and device according to claims 5 and 17. Hirsh and Volk do not explicitly disclose the step of processing comprises applying a geometrical image transformation for at least a region of the image outside the original field of view where there are pixels missing for the second field of view, or wherein the geometrical image transformation comprises filling the missing pixels using extrapolation of existing pixels.

Walczak teaches, "In the manipulation approach, an image is rendered from the audience point of view and the resulting pixels are mapped into corresponding positions in the film image. Pixel manipulation requires that image data be stretched or filled-in to complete the projected image. The three-dimensional geometric transformation of the invention enables a scene to be rendered at full resolution from the projector point of view." (abstract)

It would have been obvious at the time of the invention to one of ordinary skill in the art to use the method of filling in the region as taught by Walczak with the invention of Hirsh

and Volk, as this is a technique conventionally used to fill in unknown regions, and would have been one of a limited number of ways to fill in the information.

13. **Claims 10 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirsh (US 20020052235 A1) and Volk (US 5673401) and Walczak (US 20030052899 A1) as applied to claims 8 and 20, further in view of Kaye et al. (US 20050104878 A1).

Regarding claims 10 and 22, Hirsh, Volk and Walczak disclose the method and device according to claims 8 and 20. Hirsh, Volk and Walczak do not explicitly disclose the geometrical image transformation comprises copying border pixels for filling missing pixels.

Kaye et al. indicate a missing gap of pixels can be filled by repeating pixels from the edge of the background object (abstract, [0004], [0035]).

It would have been obvious at the time of the invention to one of ordinary skill in the art to use the method of filling in the region as taught by Kaye et al. with the invention of Hirsh, Volk and Walczak, as this is a technique conventionally used to fill in unknown regions, and would have been one of a limited number of ways to fill in the information.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Sakaguchi (US 7019750 B2)

b. Szeliski et al. (US 6215496 B1)

c. Griffin (US 5990904)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELLE ENTEZARI whose telephone number is (571)270-5084. The examiner can normally be reached on M-Th, 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571)272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michelle Entezari/
Examiner, Art Unit 2624

/VIKKRAM BALI/
Supervisory Patent Examiner, Art Unit 2624